

Patent Claims:

1. A method for the automatic determination of the installation positions of wheels in a motor vehicle, with the motor vehicle including a directly measuring tire pressure monitoring system comprising wheel-individual tire pressure measuring devices and transmitting devices for the transfer of TPMS data containing the tire air pressure values and identification numbers of the individual wheels to a receiving and evaluating device installed in or on the vehicle, as well as an indirectly measuring tire pressure monitoring system determining DDS data from the rotational behavior of the individual wheels, said data containing pressure changes and installation positions,  
c h a r a c t e r i z e d in that correlation coefficients are determined from the TPMS data and the DDS data by means of a correlation function.
2. The method as claimed in claim 1,  
c h a r a c t e r i z e d in that the correlation coefficients are determined from first allocation functions and second allocation functions by using the correlation function.
3. The method as claimed in claim 1 or 2,  
c h a r a c t e r i z e d in that the first allocation functions describing all possible allocations of the identification numbers to the installation positions are produced from the TPMS data,

and an individual characteristic value is allocated to each possible allocation, and in that the second allocation functions are produced from the DDS data and assign in each case another individual characteristic value to each possible installation position of a wheel.

4. The method as claimed in at least any one of claims 1 to 3,  
c h a r a c t e r i z e d in that the correlation function comprises an averaging operation as a function of time.
5. The method as claimed in at least any one of claims 1 to 4,  
c h a r a c t e r i z e d in that the correlation function is obtained from a quotient, from a dividend essentially composed of a multiplication of the first allocation functions with the second allocation functions, and a divisor essentially composed of a multiplication of the squared first allocation functions with the squared second allocation functions.
6. The method as claimed in at least any one of claims 1 to 5,  
c h a r a c t e r i z e d in that the correlation coefficients represent numerical values describing probabilities, whether the selected allocation of the identification numbers to the installation positions is coincident with the actual allocation, while the time averaging operation causes a standardization of the numerical values to a range of values, in particular to a range between -1 and +1.

7. The method as claimed in claim 6,  
c h a r a c t e r i z e d in that all calculated  
correlation coefficients are compared with each other,  
and the correlation coefficient with the maximum  
absolute numerical value irrespective of sign  
represents the correct allocation of the wheels to the  
installation positions, and in that the identification  
numbers are allocated to the installation positions  
according to the determined allocation.